

# Common CORE Mathematics

Practice at 3 Levels ●●●

Meets CCSS, state, and NCTM standards


Supports all learners

120+ pages of:

- Instant mini-lessons
- On-the-fly assessments
- Computation practice
- Word problems





 Common Core Grade-Specific Standards <b>Grade 1 Overview</b>					Units 1–8	Units 9–15	Units 16–19	Units 20–22
<b>Operations &amp; Algebraic Thinking</b>								
• Represent and solve problems involving addition and subtraction.					✓			
• Understand and apply properties of operations and the relationship between addition and subtraction.					✓			
• Add and subtract within 20.					✓			
• Work with addition and subtraction equations.					✓			
<b>Number &amp; Operations in Base Ten</b>								
• Extend the counting sequence.						✓		
• Understand place value.						✓		
• Use place value understanding and properties of operations to add and subtract.						✓		
<b>Measurement &amp; Data</b>								
• Measure lengths indirectly and by iterating length units.							✓	
• Tell and write time.							✓	
• Represent and interpret data.							✓	
• Geometric measurement: Recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.							✓	
<b>Geometry</b>								
• Reason with shapes and their attributes.								✓
<b>Mathematical Practices</b>								
• Make sense of problems and persevere in solving them.					✓	✓	✓	✓
• Reason abstractly and quantitatively.					✓	✓	✓	✓
• Construct viable arguments and critique the reasoning of others.					✓	✓	✓	✓
• Model with mathematics.					✓	✓	✓	✓
• Use appropriate tools strategically.					✓	✓	✓	✓
• Attend to precision.					✓	✓	✓	✓
• Look for and make use of structure.					✓	✓	✓	✓
• Look for and express regularity in repeated reasoning.					✓	✓	✓	✓



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Printed in Guangzhou, China.  
4401/0812/CA21201128

ISBN: 978-1-61269-196-1

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# Common CORE Mathematics

Practice at 3 Levels ●●●

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# Using This Book

## What Is the Common Core?

The Common Core State Standards are an initiative by the states to set shared, consistent, and clear expectations of what students are expected to learn, so teachers and parents know what they need to do to help them. The standards are designed to be rigorous and pertinent to the real world. They reflect the knowledge and skills that our young people need for success in college and careers.

## What Are the Intended Outcomes of Common Core?

The goal of the Common Core Standards is to facilitate the following competencies.

Students will:

- demonstrate independence;
- build strong content knowledge;
- respond to the varying demands of audience, task, purpose, and discipline;
- comprehend as well as critique;
- value evidence;
- use technology and digital media strategically and capably;
- come to understand other perspectives and cultures.

## What Does This Mean for You?

If your state has joined the Common Core State Standards Initiative, then as a teacher you are required to incorporate these standards into your lesson plans. Your students may need targeted practice in order to meet grade-level standards and expectations and thereby be promoted to the next grade. This book is appropriate for on-grade-level students as well as intervention, ELs, struggling readers, and special needs. To see if your state has joined the initiative, visit the Common Core States Standards Initiative website to view the most recent adoption map: <http://www.corestandards.org/in-the-states>.

## What Does the Common Core Say Specifically About Math?

For math, the Common Core sets the following key expectations.

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.



## How Does Common Core Mathematics Help My Students?

- **Mini-lesson for each unit** introduces Common Core math skills and concepts.

**Unit 8**  
**Find the Missing Number**

**Standard**

Operations and Algebraic Thinking  
Work with addition and subtraction equations.  
1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.  
1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.

**Model the Skill**

Write the following equations on the board.

$2 = 1 + 1$	$7 - 1 = 6$
$3 = 4 + 1$	$8 - 3 = 4$
$3 + 1 = 4$	$8 - 3 = 5$

Explain that an equation shows two expressions, one on each side of an equal sign, that are equal. Say: Look at the equations. We will find which one is true and which one is false. Point to  $2 = 1 + 1$ . Instruct students to find the equal sign and then look at both sides of it.

Ask: Do both sides show the same amount? (yes) If both sides have the same amount, it is true. Ask what other equations on the board are true.

Have students look at  $3 = 4 + 1$ . Ask: Do both sides show the same amount? (no) If both sides do not have the same amount, it is false. Ask what other equations on the board are false.

Assign students the appropriate practice page(s) to support their understanding of the skill. Point out that the equal sign can be in different places in an equation.

**Assess the Skill**

Use the following problems to pre-/post-assess students' understanding of the skill.

Tell whether the equation is true or false.

$12 = 12$	$7 + 6 = 6 + 7$
$5 + 6 = 12$	$9 - 4 = 3 + 3$

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**Common Core Standard(s)**  
covered in the unit

**Mini-lesson** introduces or refreshes target skills and concepts

**Quick and easy ongoing assessment opportunities**

- **Four practice pages** with three levels of differentiated practice, and word problems follow each mini-lesson.

**Unit 8 • Find the Missing Number**

Name: \_\_\_\_\_

Fill in the missing number.

1

$7 + \underline{\quad} = 10$

2

$11 - 2 = \underline{\quad}$

3

$7 = 3 + \underline{\quad}$

4

$5 = \underline{\quad} - 3$

Others that also show  $5 + 3 = 8$ .

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**Level 1:** Students who need extra support can start at the first practice page, which offers the most on-page support. This page often includes illustrations or model drawing to support every question.

Level 1



**Level 2:** The second level of practice offers streamlined support features for the first few problems (illustrations, model drawing, or an algorithm reminder for support)

Unit 6 • Find the Missing Number

Name: \_\_\_\_\_

Fill in the missing number.

1  $7 + 4 = \underline{\quad}$

2  $11 = \underline{\quad} - 4$

3  $12 - 2 = \underline{\quad}$

4  $8 + 2 = \underline{\quad}$

5  $7 = 3 + \underline{\quad}$

6  $20 - \underline{\quad} = 19$

★ Tell how you solved Problem 5.

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Level 2



**Level 3:** The third practice page does not offer on-page support and depicts how students are expected to be able to perform at this grade level, whether in class or in testing.

Unit 6 • Find the Missing Number

Name: \_\_\_\_\_

Fill in the missing number.

1  $3 + 4 = \underline{\quad}$

2  $6 - 4 = \underline{\quad}$

3  $12 - \underline{\quad} = 9$

4  $11 - \underline{\quad} = 7$

5  $\underline{\quad} + 7 = 15$

6  $\underline{\quad} + 5 = 13$

7  $13 = 6 + \underline{\quad}$

8  $3 = 6 - \underline{\quad}$

★ Tell how you could use subtraction to solve Problem 6.

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Level 3



Each practice page includes a bonus thinking-skills question so students can answer "How do you know?" to address Common Core Standards of Mathematical Practice and demonstrate their reasoning and understanding of the concept.



**Tell how you could use subtraction to solve Problem 6.**

Bonus Thinking Skills question on each practice page

**Word Problems:** Each unit ends with a page of short answer and multiple-choice word problems so students are challenged to marry their computation skills with their quantitative-reasoning and problem-solving skills and grow more familiar with the types of problems they will encounter on standardized tests.

Unit 8 • Word Problems • Find the Missing Number

Name: \_\_\_\_\_

Fill in the missing number.

1 Jill has 6 blocks. Tyler has some blocks. They have 15 blocks in all. How many blocks does Tyler have?

$6 + \underline{\quad} = 15$

2 Linda has 12 jars. She breaks some. She has 9 left. How many jars broke?

$12 - \underline{\quad} = 9$

3 You and I have 14 trucks. You have 8 trucks. How many trucks do I have?

$8 + \underline{\quad} = 14$

4 There are 16 cupcakes. We eat some. Then there are 9 left. How many did we eat?

$16 - \underline{\quad} = 9$

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Word Problem Page



## Common Core Standards Alignment Chart • Grade 1

Units	1.OA.1	1.OA.2	1.OA.3	1.OA.4	1.OA.5	1.OA.6	1.OA.7	1.OA.8	1.NBT.1	1.NBT.2	1.NBT.3	1.NBT.4	1.NBT.5	1.NBT.6	1.MD.1	1.MD.2	1.MD.3	1.MD.4	1.G.1	1.G.2	1.G.3
<b>Operations &amp; Algebraic Thinking</b>																					
Unit 1: Add To and Take From	✓			✓																	
Unit 2: Put Together and Take Apart	✓			✓																	
Unit 3: Add and Subtract to Compare	✓			✓																	
Unit 4: Add Three Numbers		✓																			
Unit 5: Use Properties of Addition to Add		✓	✓																		
Unit 6: Use Strategies to Add			✓		✓	✓															
Unit 7: Use Strategies to Subtract			✓	✓	✓	✓															
Unit 8: Find the Missing Number							✓	✓													
<b>Numbers &amp; Operations in Base Ten</b>																					
Unit 9: Count, Read, and Write Numbers to 120									✓												
Unit 10: Tens and Ones										✓											
Unit 11: Compare Numbers										✓	✓										
Unit 12: Add Two-Digit and One-Digit Numbers												✓	✓	✓							
Unit 13: Ten More, Ten Less												✓	✓								
Unit 14: Add Multiples of Ten												✓									
Unit 15: Subtract Multiples of Ten														✓							
<b>Measurement &amp; Data</b>																					
Unit 16: Compare and Order Lengths															✓	✓					
Unit 17: Measure Length with Non-Standard Units																✓					
Unit 18: Tell and Write Time																	✓				
Unit 19: Interpret Data																		✓			
<b>Geometry</b>																					
Unit 20: Use Plane Shapes																			✓		
Unit 21: Use Solid Shapes																				✓	
Unit 22: Parts of Shapes																					✓

## Unit 1

# Add To and Take From

### Standard

#### Operations and Algebraic Thinking

#### Represent and solve problems involving addition and subtraction.

**1.OA.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

#### Understand and apply properties of operations and the relationship between addition and subtraction.

**1.OA.4** Understand subtraction as an unknown-addend problem.

### Model the Skill

- ◆ Hand out 20 counters and write the following word problem on the board.

*5 ducks are in a pond.*

*Then 7 more ducks go into the pond.*

*How many ducks are in the pond?*

- ◆ **Say:** *Let's read the word problem together. We will use counters to act out the problem.* Read the problem aloud.
- ◆ Read the first line. **Ask:** *How many ducks are in the pond?* (5) Have students use 5 counters to stand for the 5 ducks. **Ask:** *How many more ducks come?* (7) *How many more counters should you take?* (7) Have students take 7 more counters. Explain that since more came, they need to add the counters or push them together. **Ask:** *How many ducks are in the pond now?* (12)
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill.

### Assess the Skill

Use the following problems to pre- or post-assess students' understanding of the skill.

$2 + 6 = \underline{\quad}$        $8 - 2 = \underline{\quad}$        $8 - 6 = \underline{\quad}$

$5 + 4 = \underline{\quad}$        $9 - 4 = \underline{\quad}$        $9 - 5 = \underline{\quad}$

$8 + 3 = \underline{\quad}$        $11 - 3 = \underline{\quad}$        $11 - 8 = \underline{\quad}$



## Unit 2

# Put Together and Take Apart

### Standard

#### Operations and Algebraic Thinking

##### Represent and solve problems involving addition and subtraction.

**1.OA.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

##### Understand and apply properties of operations and the relationship between addition and subtraction.

**1.OA.4** Understand subtraction as an unknown-addend problem.

### Model the Skill

- ◆ Hand out 20 counters and write the following word problem on the board.

*There are 6 corn muffins and 8 blueberry muffins in the oven.*

*How many muffins are in the oven?*

- ◆ **Say:** *Let's read this problem together.* Read the problem aloud. **Say:** *We will use counters to act out the problem.*
- ◆ Read the first line. **Ask:** *How many corn muffins are in the oven?* (6) Have students use 6 counters for the 6 corn muffins. **Ask:** *How many blueberry muffins are in the oven?* (8) Have students take 8 counters. **Ask:** *What do you have to do to find how many muffins are in the oven?* (push the counters together and count how many in all) **Ask:** *How many muffins are in the oven?* (14)
- ◆ Then help students write an addition sentence for the problem.
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill. Encourage students to check their work.

### Assess the Skill

**Use the following problems to pre-/post-assess students' understanding of the skill.**

$$4 + 3 = \underline{\quad} \quad 7 - 3 = \underline{\quad} \quad 7 - 4 = \underline{\quad}$$

$$4 + 6 = \underline{\quad} \quad 10 - 4 = \underline{\quad} \quad 10 - 6 = \underline{\quad}$$

$$8 + 5 = \underline{\quad} \quad 12 - 5 = \underline{\quad} \quad 12 - 7 = \underline{\quad}$$

# Unit 3

## Add and Subtract to Compare

### Standard

#### Operations and Algebraic Thinking

##### Represent and solve problems involving addition and subtraction.

**1.OA.1** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

##### Understand and apply properties of operations and the relationship between addition and subtraction.

**1.OA.4** Understand subtraction as an unknown-addend problem.

### Model the Skill

- ◆ Hand out 20 counters and write the following word problem on the board.

*Jesse has 7 stickers. Stella has 11 stickers.*

*How many more stickers does Stella have compared with Jesse?*

- ◆ **Say:** *We will use a different color counter for each child.* Have students use 7 red counters to represent Jesse's stickers and 11 yellow counters for Stella's stickers. Show them how to align the two rows to compare. **Say:** *Look at the two rows.*
- ◆ **Ask:** *How many more counters are in the bottom row than the top row? (4)* Help students make pairs matching the top and bottom counters. Have them count how many more are in the bottom row, or do not have a pair. **Ask:** *How many more stickers does Stella have than Jesse? (4)*
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill.

### Assess the Skill

**Use the following problems to pre-/post-assess students' understanding of the skill.**

*I have 8 apples.  
I need 10 to make a pie.  
How many more apples  
do I need?*

*Mom has 11 paper clips.  
Sam has 6 paper clips.  
How many more paper clips  
does Mom have than Sam?*



# Unit 4

## Add Three Numbers

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### Standard

#### Operations and Algebraic Thinking

**Represent and solve problems involving addition and subtraction.**

**1.OA.2** Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

### Model the Skill

- ◆ Hand out 20 counters and write the following word problem on the board.

*April has 4 marbles. Renee has 6 marbles and Eric has 5 marbles.  
How many marbles do they have in all?*

- ◆ **Say:** *Let's read the word problem together. We will use counters to act out the problem.* Read the problem aloud.
- ◆ Read the first line. **Ask:** *How many counters should you take?* (4) Have students take 4 counters to represent April's 4 marbles. Read the next line. **Ask:** *How many counters should you take for Renee's marbles?* (6) Help students take the correct number of counters. **Ask:** *How many counters should you take for Eric's marbles?* (5)
- ◆ **Ask:** *How many marbles are there in all?* Help students understand that they need to count all the counters to find how many in all. (15)
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill. Have them use counters or drawings.

### Assess the Skill

**Use the following problems to pre-/post-assess students' understanding of the skill.**

*The table has 3 blue cups,  
7 yellow cups, and 6 red cups.  
How many cups are on the table?*

*I have 6 blue folders,  
5 white folders, and 8 red folders.  
How many folders do I have?*

## Unit 5

# Use Properties of Addition to Add

### Standard

#### Operations and Algebraic Thinking

**Represent and solve problems involving addition and subtraction.**

**1.OA.2** Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

**Understand and apply properties of operations and the relationship between addition and subtraction.**

**1.OA.3** Apply properties of operations as strategies to add and subtract.

### Model the Skill

- ◆ Hand out 20 connecting cubes (2 different colors, 10 each) for each student and write the following problem on the board.

$$2 + 3 = \underline{\quad}$$

- ◆ **Say:** *Look at this problem. We will use cubes to solve it.* Have students show each number with a different color cube train. Have them put the trains together. Lay the train across to match the numbers in the equation.
- ◆ **Ask:** *What is  $2 + 3$ ? (5) Let's change the order of the numbers.* Demonstrate how to flip the cube train so the set of 3 is now before the set of 2. Help the students flip the train to show  $3 + 2$ .

$$3 + 2 = \underline{\quad}$$

- ◆ **Ask:** *What is  $3 + 2$ ? (5)  $2 + 3 = 5$  and  $3 + 2 = 5$ . Why do they both equal the same number? (The numbers you are adding are the same.)  $2 + 3 = 5$  and  $3 + 2 = 5$  are related facts. That means they both use the same 3 numbers.* Help students understand that changing the order of the addends does not change the sum.
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill. Use cubes to represent the two addends and then flip the cube train to show the related fact.

### Assess the Skill

Use the following problems to pre-/post-assess students' understanding of the skill.

$$4 + 3 = \underline{\quad}$$

$$8 + 6 = \underline{\quad}$$

$$9 + 2 = \underline{\quad}$$

$$3 + 4 = \underline{\quad}$$

$$6 + 8 = \underline{\quad}$$

$$2 + 9 = \underline{\quad}$$



## Unit 6

# Use Strategies to Add

### Standard

#### Operations and Algebraic Thinking

**Understand and apply properties of operations and the relationship between addition and subtraction.**

**1.OA.3** Apply properties of operations as strategies to add and subtract.

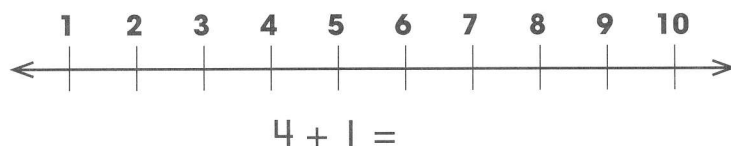
**Add and subtract within 20.**

**1.OA.5** Relate counting to addition and subtraction.

**1.OA.6** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.

### Model the Skill

- ◆ Draw this number line on the board with the following problem.



- ◆ **Say:** Look at the number line. We will use it to help add by counting on it. Have students explore the number line and discuss the numbers on it, the order of the numbers, and the end arrows.
- ◆ **Ask:** Which is the greater number? (4) Have students circle it. Then help them find the 4 on the number line. **Say:** Next we have to add 1. Demonstrate how to move forward 1 to the next number, 5.
- ◆ **Ask:** What number did you land on? (5) We started at 4 and added 1 more. We ended at 5.  $4 + 1 = 5$ . Help students understand that when they move to the right on the number line, the numbers increase by 1 each time. Explain that when they need to add, they need to move to the right.
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill. Some students may not need to use the number line.

### Assess the Skill

**Use the following problems to pre-/post-assess students' understanding of the skill.**

$$2 + 4 + 1 = \underline{\quad}$$

$$2 + 3 + 5 = \underline{\quad}$$

$$8 + 6 = 10 + \underline{\quad} = \underline{\quad}$$

## Unit 7

# Use Strategies to Subtract

### Standard

#### Operations and Algebraic Thinking

**Understand and apply properties of operations and the relationship between addition and subtraction.**

**1.OA.3** Apply properties of operations as strategies to add and subtract.

**1.OA.4** Understand subtraction as an unknown-addend problem.

#### Add and subtract within 20.

**1.OA.5** Relate counting to addition and subtraction

**1.OA.6** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; decomposing a number leading to a ten, using the relationship between addition and subtraction; and creating equivalent but easier or known sums.

### Model the Skill

- ◆ Draw this number line on the board with the following problem.



$$6 - 1 =$$

- ◆ **Say:** Look at the number line. We will use it to subtract by counting back. When we subtract, it means we take away. That means that the answers will be less than the starting number.
- ◆ **Ask:** Which direction should we move on the number line to show we are taking away? (to the left) Explain that the numbers decrease when you move left on a number line.
- ◆ **Ask:** What number should you start on? (6) How many should you count back? (1) Have students put their fingers on the 6 and move back 1. Remind them which direction to move. **Ask:** What number did you end on? (5) Have them write the number.
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill. Watch that students do not count the starting number and that they are moving left on the number line.

### Assess the Skill

Use the following problems to pre-/post-assess students' understanding of the skill.

$2 + 4 = \underline{\quad}$

$7 + 5 = \underline{\quad}$

$6 - 2 = \underline{\quad}$

$12 - 7 = \underline{\quad}$

$6 - 4 = \underline{\quad}$

$12 - 5 = \underline{\quad}$

## Unit 8

# Find the Missing Number

### Standard

#### Operations and Algebraic Thinking

##### Work with addition and subtraction equations.

**1.OA.7** Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.

**1.OA.8** Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.

### Model the Skill

- ◆ Write the following equations on the board.

$$2 = 1 + 1$$

$$7 - 1 = 6$$

$$3 = 4 + 1$$

$$8 - 3 = 4$$

$$3 + 1 = 4$$

$$8 - 3 = 5$$

- ◆ Explain that an equation shows two expressions, one on each side of an equal sign, that are equal. **Say:** *Look at the equations. We will find which are true and which are false.* Point to  $2 = 1 + 1$ . Instruct students to find the equal sign and then look at both sides of it.
- ◆ **Ask:** *Do both sides show the same amount? (yes) If both sides have the same amount, it is true.* Ask what other equations on the board are true.
- ◆ Have students look at  $3 = 4 + 1$ . **Ask:** *Do both sides show the same amount? (no) If both sides do not have the same amount, it is false.* Ask what other equations on the board are false.
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill. Point out that the equal sign can be in different places in an equation.

### Assess the Skill

Use the following problems to pre-/post-assess students' understanding of the skill.

- ◆ **Say:** *Look at each equation. Tell whether each one is true or false. Do both sides show the same amount?*

$$12 = 12$$

$$7 + 6 = 6 + 7$$

$$5 + 6 = 12$$

$$9 - 4 = 3 + 3$$

## Unit 9

# Count, Read, and Write Numbers to 120

### Standard

#### Number and Operations in Base Ten

##### Extend the counting sequence.

**1.NBT.1** Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

### Model the Skill

- ◆ Display a hundred chart or provide charts for each student.
- ◆ **Say:** Look at this chart. It is a hundred chart. It shows the numbers in order to 100. Have the class read the numbers across the top row. **Ask:** Where do we go to find the next number? (down to the next row) Show students where to find the next number and continue counting to 50.
- ◆ Write the following counting sequence (with blanks) on the board.

22, \_\_\_\_\_, \_\_\_\_\_, 25, 26, 27, \_\_\_\_\_, \_\_\_\_\_, 30

- ◆ **Say:** Look at this row of numbers. Some numbers are missing. Read the numbers and use the word “blank” when appropriate. **Say:** We will read the numbers and say the next counting number when we see a blank.
- ◆ **Ask:** What number did we say after 22? (23) Let's fill it in. What number did we say after 27? (28) Let's fill it in. Help students write the missing numbers.
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill.

### Assess the Skill

Use the following problem to pre-/post-assess students' understanding of the skill.

- ◆ **Say:** Look at each set. Tell which one is in order.

45	46	47	48	49	108	109	110	111	112	113
48	45	47	49	46	108	109	110	111	113	114



# Unit 10

## Tens and Ones

### Standard

#### Number and Operations in Base Ten

##### Understand place value.

**1.NBT.2** Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand: 10 can be thought of as a bundle of ten ones — called a “ten”; the numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones; the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

### Model the Skill

- ◆ Hand out ten-frames and 15 counters to each student.
- ◆ **Say:** *Look at the ten-frame. Let's count how many counters are in it. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. Let's fill a ten-frame.* Help students count out 10 counters and fill their ten-frames. **Say:** *We have 10 ones or we can say we have 1 ten.* Point out the “1 ten” under the ten-frame.
- ◆ **Say:** *Now I will add one more counter. Does it fit? How many extra counters do I have? (1)* Help students model it by putting one more counter next to their frames. **Say:** *We have 1 more or we can say we have 1 one.* Point out the “1 one.” *We have 1 ten and 1 one. How many are there in all? (11)* Help students count and write the number.
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill. Encourage modeling the problems, then counting how many tens and ones, and writing how many in all.
- ◆ Help students realize that the two digits of the two-digit number represent the amounts of tens and ones.

### Assess the Skill

**Use the following problems to pre-/post-assess students' understanding of the skill.**

- ◆ Hand out base-ten blocks. **Say:** *Look at each number.* Use base ten blocks to form each number. Tell how many tens and ones are in each number.

14    73    26    81    60    5

## Unit 11

# Compare Numbers

### Standard

#### Number and Operations in Base Ten Understand place value.

**1.NBT.2** Understand that the two digits of a two-digit number represent amounts of tens and ones.

**1.NBT.3** Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols  $>$ ,  $=$ , and  $<$ .

### Model the Skill

- ◆ **Say:** *Today we will compare numbers. There are special signs used to compare numbers. Draw a “greater than” sign:  $>$ , a “less than” sign:  $<$ , and an “equal to” sign:  $=$ . Name each sign as you draw it.*
- ◆ Explain to students that to compare numbers, first they have to look at the number of tens. The number that has more tens is greater, making the other number less. **Ask:** *Is 23 greater than, less than, or equal to 58?* (less than,  $<$ ) Help the students write the less than sign. Explain that the pointy side always points to the lesser number and the large mouth side opens to the greater number.
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill. Explain that when the tens are the same, they need to compare the ones, and if the ones are also the same, the numbers are equal.

### Assess the Skill

Use the following problems to pre-/post-assess students’ understanding of the skill.

- ◆ **Say:** *Look at each expression. Tell if each one is true or false.*

$$14 < 16$$

$$36 = 26$$

$$81 > 18$$

$$56 > 72$$

## Unit 12

# Add a Two-Digit Number and a One-Digit Number

### Standard

#### Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract.

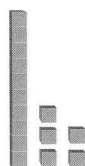
- 1.NBT.4** Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.
- 1.NBT.5** Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.
- 1.NBT.6** Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

### Model the Skill

- ◆ Hand out base-ten blocks. Then demonstrate the following problem.

$$13 + 2 =$$

$$\begin{array}{r} 13 \\ + 2 \\ \hline \end{array}$$



- ◆ **Say:** Today we are going to add to find the sum or total. Look at the models of tens and ones. The rod shows 10. The single units show ones. How many ones are there in all? (5) Remind students of different strategies they can use to add the ones: count units, count on, or add. Help students record the ones in the vertical addition in the correct place.
- ◆ **Ask:** How many tens are there in all? (1) Record the tens. **Say:** What is the sum of  $13 + 2$ ? (15) Help students understand how the models and vertical addition connect. They may solve in other ways.
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill. Allow students to use manipulatives as needed.

### Assess the Skill

Use the following problems to pre-/post-assess students' understanding of the skill.

$$\begin{array}{r} 14 \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ + 4 \\ \hline \end{array}$$

$$\begin{array}{r} 64 \\ + 2 \\ \hline \end{array}$$

$$\begin{array}{r} 78 \\ + 6 \\ \hline \end{array}$$

# Unit 13

## Ten More, Ten Less

### Standard

#### Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract.

**1.NBT.4** Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

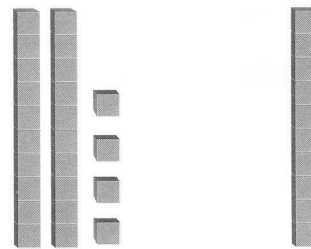
**1.NBT.5** Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.

### Model the Skill

- ◆ Hand out ten-rods and ones. Then demonstrate the following problem.

$$24 + 10 =$$

$$\begin{array}{r} 24 \\ + 10 \\ \hline \end{array}$$



- ◆ **Say:** Today we are going to add ten to numbers. Look at this problem. **Ask:** How many tens are there in 20? (2) How many tens are there in 10? (1)
- ◆ Explain to students that they are adding 1 to the tens digits when they add 10 to a number. Tell them if they know  $2 + 1 = 3$ , then they should know  $20 + 10$ .
- ◆ **Ask:** If we have 2 tens and 1 ten, how many tens are there in all? (3)
- ◆ Point out that the first number has 4 ones. Explain that since they are adding 10, they should think of it as 1 ten and 0 ones so only the tens digit will change and the ones digit will stay the same. **Ask:** What is  $24 + 10$ ? (34)
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill. Remind them they are adding or subtracting 1 ten each time.

### Assess the Skill

Use the following problems to pre-/post-assess students' understanding of the skill.

$$\begin{array}{r} 20 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} 34 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} 11 \\ + 10 \\ \hline \end{array}$$



# Unit 14

## Add Multiples of Ten

### Standard

#### Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract.

**1.NBT.4** Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

### Model the Skill

- ◆ Hand out base-ten blocks and write the following problems on the board.

$$10 + 10 =$$

$$42 + 30 =$$

- ◆ **Say:** *Today we are going to add to find the sum.* Remind students that the rods show 10. Review different strategies they can use to add: add, count, count on, or use a fact they know.
- ◆ **Say:** *Write these problems on a piece of paper. Then use your blocks to show  $10 + 10$ . Have them put the rods together to add. Ask: How many ones are there in all? (0) Record the ones. How many tens are there in all? (2) Record the tens. What is the sum of  $10 + 10$ ? (20)*
- ◆ Have students look at the next problem and model it. Remind them that when adding a number with two or more digits, they should always add the ones first. **Say:** *How many ones are there in all? (2) How many tens are there in all? (7) What is the sum of  $42 + 30$ ? (72)*
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill.

### Assess the Skill

Use the following problems to pre-/post-assess students' understanding of the skill.

$$\begin{array}{r} 20 \\ + 30 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ + 20 \\ \hline \end{array}$$

$$\begin{array}{r} 33 \\ + 40 \\ \hline \end{array}$$

$$\begin{array}{r} 21 \\ + 70 \\ \hline \end{array}$$

## Unit 15

# Subtract Multiples of Ten

### Standard

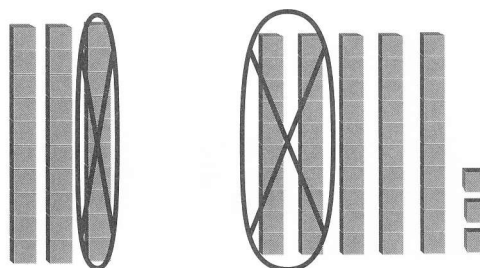
#### Number and Operations in Base Ten

Use place value understanding and properties of operations to add and subtract.

**1.NBT.6.** Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

### Model the Skill

- Hand out base-ten blocks and draw the following problem on the board.



$$30 - 10 =$$

$$53 - 20 =$$

- Say:** Today we are going to subtract. Look at the models for this problem. Explain that the first number, 30, is how many in all. Use your blocks to show 30.
- Tell students that the number being taken away is circled and crossed out with an X. **Ask:** How many do you have to take away? (10) Have students take away 1 ten. **Ask:** How many ones are there? (0) How many tens are left? (2) What is  $30 - 10$ ? (20)
- Have students look at the next problem and model it. Remind them that when subtracting a number with two or more digits, they should always subtract the ones first. **Ask:** What is  $3 - 0$ ? (3) Have students record the ones. **Ask:** What is  $5 - 2$ ? (3) Have students record the tens. **Ask:** What is  $53 - 20$ ? (33)
- Assign students the appropriate practice page(s) to support their understanding of the skill.

### Assess the Skill

Use the following problems to pre-/post-assess students' understanding of the skill.

$$\begin{array}{r} 30 \\ - 20 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ - 40 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ - 50 \\ \hline \end{array}$$

$$\begin{array}{r} 91 \\ - 70 \\ \hline \end{array}$$

## Unit 16

# Compare and Order Lengths

### Standard

#### Measurement and Data

#### Measure lengths indirectly and by iterating length units.

**1.MD.1** Order three objects by length; compare the lengths of two objects indirectly by using a third object.

**1.MD.2** Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.

### Model the Skill

- ◆ Draw two lines of different lengths on the board.
- ◆ **Say:** *Today we will compare objects to see which is longer and which is shorter. Look at the two lines.* Point out that both of their ends start against the same starting line. Explain that to compare lengths, students need to put the ends of objects at the same place.
- ◆ **Say:** *To find which line is longer, you need to find which sticks out farther. Which line is longer? Circle it.* **Say:** *To find which is shorter, you need to find which does not stick out as far or which ends closer to the line where they started. Which line is shorter? Draw an X next to it.*
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill.

### Assess the Skill

Use the following activity to pre-/post-assess students' understanding of the skill.

- ◆ **Say:** *Look at the door. Is the door longer from side to side or top to bottom?* Repeat with other items in the classroom. Then ask groups of students to line themselves up in order of height.

## Unit 17

# Measure Length with Non-Standard Units

### Standard

#### Measurement and Data

**Measure lengths indirectly and by iterating length units.**

**1.MD.2** Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.

### Model the Skill

- ◆ Hand out unsharpened pencils and paper clips of equal size and length.
- ◆ **Say:** *Today we will measure the length of objects. We will use paper clips to measure.* Point out that all the clips are exactly the same size because when you use objects to measure, the objects all must be exactly the same size.
- ◆ **Say:** *To measure how long the pencil is, we will place the clips below it from the beginning to the end.* Model how to place the first clip at the very beginning of the pencil, and have students do the same.
- ◆ **Ask:** *Are we at the end of the pencil yet?* (no) Demonstrate how to place the next clip touching but not overlapping the first clip.  
**Ask:** *Have we reached the end yet?* (no) Add clips until they have reached the end of the pencil. **Ask:** *How many clips long is the pencil?* (about 6 small paper clips or 4 large paper clips)
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill.

### Assess the Skill

**Use the following activity to pre-/post-assess students' understanding of the skill.**

- ◆ Hand out paper clips.
- ◆ **Say:** *Use the paper clips to measure objects. What is the length of your desk in paper clips? What is the length of your shoe in paper clips?.*



# Unit 18

## Tell and Write Time

### Standard

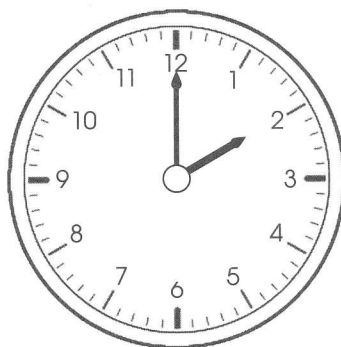
#### Measurement and Data

##### Tell and write time.

**1.MD.3** Tell and write time in hours and half-hours using analog and digital clocks.

### Model the Skill

- ◆ Draw the following clock on the board.

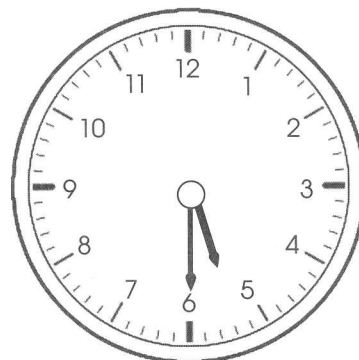
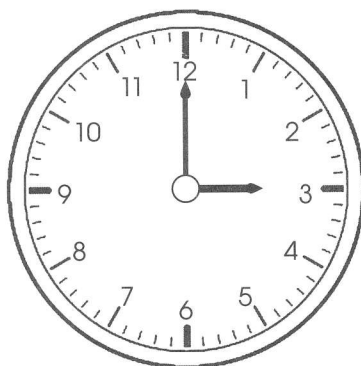


- ◆ **Say:** Look at the clock. A clock has an hour hand and a minute hand. It also has 12 numbers. Help students point to each number as you say them aloud from 1 to 12. Explain that the hands move in the same direction as the numbers.
- ◆ **Say:** The short hand tells the hour. The long hand tells the minutes. When the long or minute hand is straight up on the 12, we say the time as o'clock.
- ◆ **Ask:** What number is the hour hand on? (2) What number is the minute hand on? (12) Explain that it means it is exactly on the hour and we will say o'clock. **Ask:** What time is it? (2 o'clock)
- ◆ Assign students the appropriate practice page(s) to support their understanding

### Assess the Skill

Use the following clock faces to pre-/post-assess students' understanding of the skill.

- ◆ **Say:** Look at each clock. What time does each clock show?



# Unit 19

## Interpret Data

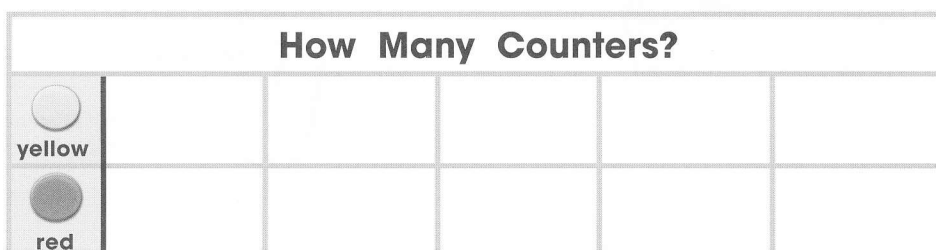
### Standard

#### Measurement and Data Represent and interpret data.

**1.MD.4** Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

### Model the Skill

- ◆ Hand out two colors of counters (4 red and 2 yellow) and draw a 6 x 2 picture graph on the board titled “How Many Counters?”



- ◆ **Say:** *This is called a picture graph. It shows information using pictures.* Read the title and point out the parts of the graph and explain their meanings.
- ◆ Instruct students to move the counters onto the graph. **Ask:** *Where will you put the yellow counters? (in the first row)* Tell students to always begin with the box next to the picture and that no boxes should be skipped. Repeat for the red counters.
- ◆ Explain that by looking at the graph, they can find information or data. **Ask:** *How many yellow counters are there? (2)* Tell students not to count the shaded counters at the head of each row.
- ◆ **Ask:** *Which has more? (red)* A longer row means that that object has more than a shorter row.

### Assess the Skill

Use the following activity to pre-/post-assess students' understanding of the skill.

- ◆ **Say:** *Take a handful of 3 different color counters. Then draw a pictograph that shows the counters you picked.*

# Unit 20

## Use Plane Shapes

### Standard

#### Geometry

#### Reason with shapes and their attributes.

**1.G.1** Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.

### Model the Skill

- ◆ Hand out pattern blocks.
- ◆ Draw a square on the board. **Ask:** *What is this shape?* (square) *How many sides does a square have?* (4) *How many corners does it have?* (4) Remind students that all sides are equal. Tell students that a square is a special type of rectangle because all the sides are equal.
- ◆ **Ask:** *Does it matter what color a shape is?* (no) *Does it matter if you turn the shape?* (no) Help students find all the squares and circle them. (Check students' work.)
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill. Discuss that shapes can be any size, can be any color, can be turned in any direction, and must have all sides touching. Review the difference between a plane two-dimensional shape and a solid three-dimensional shape.

### Assess the Skill

**Use the following activities to pre-/post-assess students' understanding of the skill.**

- ◆ **Say:** *Use triangular pattern blocks to make a . . .*
  - square
  - rectangle
  - larger triangle

# Unit 21

## Use Solid Shapes

### Standard

#### Geometry

#### Reason with shapes and their attributes.

**1.G.2** Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.

### Model the Skill

- ◆ Hand out cubes and rectangular prisms.
- ◆ **Say:** *Today we will work with solid shapes. Solid shapes are not flat like plane shapes. You can hold them.* Hold up a cube. **Ask:** *What is the name of this shape? (cube) How many sides or faces does a cube have? (6) How many corners does it have? (8) Point out that all the sides are equal.*
- ◆ Hold up a rectangular prism. **Ask:** *What is this shape? (rectangular prism) How many sides or faces does it have? (6) How many corners does it have? (8) Discuss how it is similar to and different from a cube.*
- ◆ Direct students to build a wall. **Ask:** *What shapes will you need for the bottom of the wall? (cubes and rectangular prisms). Make sure students line them up in a row in the same order as shown. Have them follow each step, putting each row on top of the previous one.*
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill.

### Assess the Skill

**Use the following activities to pre-/post-assess students' understanding of the skill.**

- ◆ **Say:** *Use blocks to build a . . .*
  - tower
  - house
  - castle



# Unit 22

## Parts of Shapes

### Standard

#### Geometry

#### Reason with shapes and their attributes.

**1.G.3** Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

### Model the Skill

- ◆ Hand out blank pieces of paper.
- ◆ **Ask:** *Did you ever have one of something that you had to share with someone?* Discuss the need for equal shares. **Say:** *Pretend you want to share this piece of paper with a friend. Draw a line making 2 equal shares. (Check students' drawings.)*
- ◆ Introduce the word **half** to students. Discuss that there is more than 1 way to make two equal shares, or halves. **Say:** *Now you will draw a different line to make the next rectangle into two equal shares.* Check that students have drawn a different line than they drew for the first problem.
- ◆ Assign students the appropriate practice page(s) to support their understanding of the skill.

### Assess the Skill

Use the following problems to pre-/post-assess students' understanding of the skill.

- ◆ Draw each shape. Then ask students to draw a line that divides each shape into two equal shares. Repeat with four equal shares.

